CLAIMS

1. A protein selected from the following (a) or (b):

(a) a protein comprising the amino acid sequence as shown in SEQ ID NO: 18 or 24;

(b) a protein which comprises the amino acid sequence as shown in SEQ ID NO: 18 or 24 having deletion, substitution or addition of one or several amino acids, and has deposition activity onto extracellular matrix.

2. A protein selected from the following (a) or (b):

(a) a protein consisting of the amino acid sequence as shown in SEQ ID NO: 6, 8, 10, 12, 18 or 24;

(b) a protein which consists of the amino acid sequence as shown in SEQ ID NO: 6, 8, 10, 12, 18 or 24 having deletion, substitution or addition of one or several amino acids, and has deposition activity onto extracellular matrix.

3. A protein selected from the following (a) or (b):

(a) a protein comprising the amino acid sequence as shown in SEQ ID NO: 14;

(b) a protein which comprises the amino acid sequence as shown in SEQ ID NO: 14 having deletion, substitution or addition of one or several amino acids, and has inhibitory activity against deposition onto extracellular matrix.

4. A gene encoding a protein selected from the following (a) or (b):

(a) a protein comprising the amino acid sequence as shown in SEQ ID NO: 18 or 24;

(b) a protein which comprises the amino acid sequence as shown in SEQ ID NO: 18 or 24 having deletion, substitution or addition of one or several amino acids, and has deposition activity onto extracellular matrix.

5. A gene encoding a protein selected from the following (a) or (b):

(a) a protein consisting of the amino acid sequence as shown in SEQ ID NO: 6, 8, 10, 12, 18 or 24;

(b) a protein which consists of the amino acid sequence as shown in SEQ ID NO: 6, 8, 10, 12, 18 or 24 having deletion, substitution or addition of one or several amino acids, and has deposition activity onto extracellular matrix.

6. A gene encoding a protein selected from the following (a) or (b):

(a) a protein comprising the amino acid sequence as shown in SEQ ID NO: 14;

(b) a protein which comprises the amino acid sequence as shown in SEQ ID NO: 14 having deletion, substitution or addition of one or several amino acids, and has inhibitory activity against deposition onto extracellular matrix.

7. A gene comprising a DNA selected from the following (a) or (b):

(a) a DNA comprising the nucleotide sequence as shown in SEQ ID NO: 17 or 23;

(b) a DNA which hybridizes to a DNA comprising a nucleotide sequence complementary to a DNA consisting of the nucleotide sequence as shown in SEQ ID NO: 17 or 23 under stringent conditions, and encodes a protein having deposition activity onto extracellular matrix.

8. A gene comprising a DNA selected from the following (a) or (b):

(a) a DNA consisting of the nucleotide sequence as shown in SEQ ID NO: 5, 7, 9, 11, 17 or 23;

(b) a DNA which hybridizes to a DNA consisting of a nucleotide sequence complementary to a DNA consisting of the nucleotide sequence as shown in SEQ ID NO: 5, 7, 9, 11, 17 or 23 under stringent conditions, and encodes a protein having deposition activity onto extracellular matrix.

9. A gene comprising a DNA selected from the following (a) or (b):

(a) a DNA comprising the nucleotide sequence as shown in SEQ ID NO: 13;

(b) a DNA which hybridizes to a DNA comprising a nucleotide sequence complementary to a DNA consisting of the nucleotide sequence as shown in SEQ ID NO: 13 under stringent conditions, and encodes a protein having inhibitory activity against deposition onto extracellular matrix.

10. A recombinant vector comprising the gene according to any one of claims 4 to 9.

11. A transformant comprising the recombinant vector according to claim 10.

12. A method of producing a partial fragment of Del-1 protein, comprising culturing the transformant according to claim 11 and collecting the partial fragment of Del-1 protein from the resultant culture.

13. A method of identifying a site in extracellular matrix at which the protein according to any one of claims 1 to 3 deposits, comprising reacting said protein with extracellular matrix.

14. A reagent for identifying a site of deposition in extracellular matrix, comprising the protein according to any one of claims 1 to 3.

15. A fusion protein composed of the protein according to any one of claims 1 to 3 linked to a molecule of interest to be expressed.

16. A drug delivery system comprising the fusion protein according to claim 15.

17. A gene encoding a fusion protein, wherein the gene according to any one of claims 4 to 9 is linked to a gene encoding a molecule of interest to be expressed.

18. A recombinant vector comprising the gene according to claim 17.

19. A transformant comprising the recombinant vector according to claim 18.

20. A method of producing a fusion protein composed of a partial fragment of Del-1 protein and a molecule of interest to be expressed, comprising culturing the transformant according to claim 19 and collecting the fusion protein from the resultant culture.

21. A method of recovering a molecule of interest, comprising allowing the fusion protein according to claim 15 to deposit onto extracellular matrix and collecting the molecule of interest.

22. A method of allowing a molecule of interest to deposit, comprising the following steps:

(a) a step of producing a fusion protein composed of the molecule of interest to be expressed and a partial fragment of Del-1 protein by culturing the transformant according to claim 19; and

(b) a step of allowing the fusion protein to deposit onto extracellular matrix.

23. A method of recovering a molecule of interest, comprising the following steps:

(a) a step of producing a fusion protein composed of the molecule of interest to be expressed and a partial fragment of Del-1 protein by culturing the transformant according to claim 19;

(b) a step of allowing the fusion protein to deposit onto extracellular matrix; and

(c) a step of cutting off the protein of interest from the fusion protein to thereby collect the molecule of interest.

24. A method of regulating deposition activity onto extracellular matrix, comprising reacting a fragment within the amino acid sequence as shown in SEQ ID NO: 2 comprising an active center region and a positive regulation region and/or a fragment within the amino acid sequence as shown in SEQ ID NO: 2 comprising an active center region and a negative regulation region with extracellular matrix.

25. The method according to claim 24, wherein the amino acid sequence of the active center region is as shown in SEQ ID NO: 4.

26. The method according to claim 24, wherein the amino acid sequence of the positive regulation region is as shown in SEQ ID NO: 20.

27. The method according to claim 24, wherein the amino acid sequence of the negative regulation region is as shown in SEQ ID NO: 22.